

## Steps towards scale construction

The example of the Personality Research Questionnaire from Fall 04

## Steps toward scale construction

- Develop theory of construct to be measured
- Develop items to measure construct
- Administer items
- Find internal consistency reliabilities
- Find intercorrelation with other constructs
  - (discriminant validity)

## Personality Research Form 04 Alpha reliabilities on diagonal

	selfS	selfI	selfN	selfA
selfS	<i>0.88</i>	0.37	0.07	-0.13
selfI	0.37	<i>0.76</i>	-0.18	-0.23
selfN	0.07	-0.18	<i>0.78</i>	-0.10
selfA	-0.13	-0.23	-0.10	<i>0.76</i>

## Estimates of Validity

- Discriminant Validity
  - Do measures of different things not correlate?
- Convergent Validity
  - Need to have a criterion to measure
  - Consider peer ratings of same construct

## Structure of Peer ratings

	Soc	Imp	Nach	Anx
Soc	<i>1.00</i>	0.29	0.09	-0.09
Imp	0.29	<i>1.00</i>	-0.26	-0.28
Nach	0.09	-0.26	<i>1.00</i>	0.39
Anx	-0.09	-0.28	0.39	<i>1.00</i>

## Convergent and Discriminant Validity: Multiple measures

selfS	selfI	selfN	selfA	Soc	Imp	Nach	Anx
<i>0.88</i>	0.37	0.07	-0.13	0.55	0.25	-0.01	-0.12
0.37	<i>0.76</i>	-0.18	-0.23	0.09	0.33	-0.23	-0.41
0.07	-0.18	<i>0.78</i>	-0.10	-0.08	-0.05	0.21	-0.05
-0.13	-0.23	-0.10	<i>0.76</i>	-0.04	-0.14	-0.10	0.48
<b>0.55</b>	0.09	-0.08	-0.04	<i>1.00</i>	0.29	0.09	-0.09
0.25	<b>0.33</b>	-0.05	-0.14	0.29	<i>1.00</i>	-0.26	-0.28
-0.01	-0.23	<b>0.21</b>	-0.10	0.09	-0.26	<i>1.00</i>	0.39
-0.12	-0.41	-0.05	<b>0.48</b>	-0.09	-0.28	0.39	<i>1.00</i>

## Alternative measures of constructs: PRQ vs. Big 5

	selfR	selfI	selfM	selfA	Soc	Imp	Nach	Anx	ext	con	open	stability	agree
selfR	0.9	0.4	0.1	-0.1	0.6	0.3	0.0	-0.1	0.7	0.1	0.2	0.2	0.5
selfI	0.4	0.8	-0.2	-0.2	0.1	0.3	-0.2	-0.4	0.4	-0.4	0.2	0.2	0.0
selfM	0.1	-0.2	0.8	-0.1	-0.1	-0.1	0.2	-0.1	0.1	0.7	0.5	-0.1	0.1
selfA	-0.1	-0.2	-0.1	0.8	0.0	-0.1	-0.1	0.5	-0.2	0.1	-0.3	-0.6	-0.2
Soc	0.6	0.1	-0.1	0.0	1.0	0.3	0.1	-0.1	0.4	0.0	0.1	0.2	0.3
Imp	0.3	0.3	-0.1	-0.1	0.3	1.0	-0.3	-0.3	0.2	-0.2	0.1	0.0	0.1
Nach	0.0	-0.2	0.2	-0.1	0.1	-0.3	1.0	0.4	0.1	0.2	0.1	0.0	0.2
Anx	-0.1	-0.4	-0.1	0.5	-0.1	-0.3	0.4	1.0	-0.2	0.1	-0.3	-0.3	0.0
ext	0.7	-0.4	0.1	-0.2	0.4	0.2	0.1	-0.2	0.6	0.2	0.4	0.1	0.4
con	0.1	-0.4	0.7	0.1	0.0	-0.2	0.2	0.1	0.2	0.6	0.3	-0.1	0.3
open	0.2	0.2	0.5	-0.3	0.1	0.1	0.1	-0.3	0.4	0.3	0.6	0.1	0.3
stability	0.2	0.2	-0.1	-0.6	0.2	0.0	0.0	-0.3	0.1	-0.1	0.1	0.6	0.3
agree	0.5	0.0	0.1	-0.2	0.3	0.1	0.2	0.0	0.4	0.3	0.3	0.3	0.3

## Sociability items

Meeting new people excites me	Q38	0.71	0.3	0.16	-0.08
I make friends quickly	Q8	0.47	0.39	0.02	-0.11
I often meet new people	Q12	0.66	0.24	0.23	-0.14
I am skilled in handling social situations.	Q63	0.65	0.24	0.05	-0.11
I feel at ease with people.	Q88	0.64	0.24	0.27	-0.26
I am likely to be the first to approach someone I know.	Q41	0.52	0.14	0.24	-0.09
I consider myself to be a shy person	Q72	-0.4	-0.24	0.04	0.29
I enjoy group outings	Q36	0.6	0.04	0.14	0.04
I am the life of the party.	Q80	0.59	0.28	-0.06	-0.11
Social events make me nervous	Q56	-0.56	-0.26	-0.14	0.28
I enjoy participating in and contributing to conversations.	Q48	0.55	0.03	0.24	-0.18
I am interested in people.	Q6	0.55	0.09	-0.08	-0.04
I talk to strangers on airplanes, buses, etc	Q61	0.54	0.06	-0.03	0
I feel happiest when I am with others	Q4	0.53	0.13	0.12	-0.16
I am much more likely to go to a party than to read	Q32	0.53	0.13	0.02	0.08
I have more fun when I am with friends than when I am alone	Q16	0.52	0.2	-0.11	0.07
I am tempted to talk to others even when talking to them	Q53	0.51	0.4	-0.06	-0.02
I try to avoid speaking to people who are not well-known	Q49	-0.26	-0.16	0.12	0.22
I enjoy speaking in front of people	Q44	0.49	0.32	0.18	-0.31
I prefer spending time alone to spending it with others	Q40	-0.44	-0.11	0.03	0.15

## Impulsivity

I am spontaneous and like to make plans at the last minute	Q18	0.29	0.75	0.01	-0.28
I engage in a lot of high risk activities	Q35	0.23	0.68	0.09	-0.08
My friends think I'm spontaneous	Q67	0.43	0.67	0.04	-0.28
I tend to act on the spur of the moment to get what I want	Q59	0.37	0.65	-0.03	-0.08
I often act without a plan	Q39	0.33	0.63	-0.24	-0.21
I prefer activities that most people would consider dull	Q18	0.18	0.6	0.04	-0.11
I don't like changing my plans at the last minute	Q11	-0.19	-0.36	-0.2	0.42
I often speak without thinking first	Q23	0.32	0.52	-0.2	0.1
I tend to live in the present rather than prepare for the future	Q45	0.22	0.52	-0.47	-0.19
I often end up in dangerous/risky situations because I am impulsive	Q47	0.05	0.51	-0.28	0.07
I live by the motto "you only live once"	Q27	0.21	0.49	0.09	-0.18
I usually drive far above the speed limit	Q63	0.07	0.47	0.07	-0.06
I avoid activities that involve potential harm/injury	Q61	-0.05	-0.46	-0.15	0.08
I am easily distracted	Q79	0.22	0.45	-0.43	0.34
I am always prepared.	Q82	0.14	-0.42	0.5	-0.06
In my work I do just enough to 'get by'	Q14	0.09	0.42	-0.4	-0.14
I do not like new situations.	Q5	-0.28	-0.41	-0.2	0.48
I do things according to a plan.	Q69	-0.12	-0.41	-0.05	0.48
	Q87	0.09	-0.41	0.33	0.2

## Achievement

I am often called an over-achiever	Q38	0.08	-0.07	0.73	-0.04
I always strive to do better	Q22	0.05	-0.2	0.67	0.05
I strive to complete my work even when it is very tedious	Q18	0	-0.25	0.62	-0.01
I am persistent in completing tasks	Q30	0.06	-0.19	0.62	-0.01
I often set goals for myself	Q27	0.07	-0.15	0.6	0.1
I prefer to engage in challenging tasks	Q10	0.04	0.13	0.59	-0.2
I believe in the motto, "if at first you don't succeed, try, try again"	Q46	0.08	-0.19	0.57	0.03
If I cannot complete a task, I give up	Q6	0.09	0.14	-0.56	0.13
I continue until everything is perfect.	Q70	0.04	-0.05	0.54	0.11
I have a definite five year plan	Q26	0.06	-0.21	0.51	0.12
I am always prepared.	Q82	0.14	-0.42	0.5	-0.06
I tend to live in the present rather than prepare for the future	Q15	0.22	0.52	-0.47	-0.19
My ideal future is to not work much and live modestly	Q28	-0.03	0.26	-0.46	0.09
I hope to surpass the successes of my parents	Q76	-0.1	0.15	0.46	-0.11
I am easily distracted	Q79	0.22	0.45	-0.43	0.34
I hope to be more successful than my peers in 10 years	Q34	0.12	0.12	0.43	-0.21
I am full of ideas.	Q84	0.24	0.12	0.42	-0.21
I am exacting in my work.	Q87	-0.04	-0.28	0.41	0.06
I prefer tasks that don't require detailed work	Q75	0.03	0.18	-0.41	0.26
I am particularly excited by success	Q67	0.11	0.05	0.41	0.1

## Anxiety

I am often overwhelmed or consumed by my worries	Q62	-0.04	-0.2	-0.01	0.06
I often feel tense for no particular reason.	Q65	-0.1	-0.1	-0.09	0.09
My friends tell me that I worry too much.	Q77	0.04	-0.12	0.04	0.09
I am a nervous person most of the time.	Q69	-0.01	-0.26	-0.13	0.04
I frequently worry about things that end up being minor	Q60	0.02	-0.28	-0.01	0.04
I often feel uptight or on edge.	Q67	0.02	-0.12	-0.02	0.09
Worrying prevents me from performing tasks.	Q71	0.02	0.01	-0.23	0.05
It is hard for me to relax.	Q73	-0.06	-0.15	-0.12	0.08
I am relaxed most of the time.	Q61	0.04	0.17	-0.07	-0.08
I worry about past events for many days after the event	Q63	-0.03	-0.06	-0.13	0.03
I am a worry free person most of the time.	Q6	0.02	0.02	0.06	-0.04
I am afraid I will do or say the wrong things.	Q69	-0.18	0	-0.21	0.14
I cannot concentrate when I am in stressful situations	Q68	0.02	-0.01	-0.18	0.1
I worry about the future.	Q6	0.02	0.02	0	0.14
I am not easily bothered by things.	Q65	0.13	0.02	-0.02	-0.07
I spend more time worrying about finishing a paper than I should.	Q61	-0.06	-0.06	-0.16	0.03
I worry less about things than I probably should.	Q61	0.06	0.06	-0.12	-0.02
I cannot sleep if I have a lot to do.	Q77	0.1	-0.03	0.08	0.02
I typically take things as they come.	Q69	0.09	0.07	-0.12	-0.1
I seldom feel blue.	Q69	0.12	0.02	0.01	-0.1
I do not like new situations.	Q5	-0.28	-0.41	-0.2	0.48
I don't like changing my plans at the last minute	Q11	-0.19	-0.36	-0.2	0.42
I avoid situations that have a high risk of failure	Q65	-0.03	-0.14	-0.21	0.01
I would rather succeed at an easy task than fail at a hard one	Q68	-0.06	-0.16	-0.24	0.1